



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,636	01/23/2001	Alan K. Gorenstein	38188-382	8377

7590 08/12/2003
MCDERMOTT, WILL & EMERY
600 13th Street, N.W.
Washington, DC 20005-3096

EXAMINER

LE, KHANH H

ART UNIT	PAPER NUMBER
----------	--------------

3622

DATE MAILED: 08/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/766,636

Applicant(s)

GORENSTEIN, ALAN K.

Examiner

Khanh H. Le

Art Unit

3622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 3622

Reply to RCE and Amendment

1. This Office Action is responsive to Applicant's Correspondence filed 5/23/2003 (Extension of Time, Request for RCE, Preliminary Amendment, papers 21-23).

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/23/2003 has been entered.

Claims 1-21 were pending and active. No amendments were made to those claims. New claims 22-32 have been added. Claims 1-32 are now pending and considered. Claims 1, 5, 16, 18, 22 are independent.

Examiner's Note

2. Examiner has pointed out particular references contained in the prior art of record in the body of this action for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claims, other passages and figures may apply as well. It is requested from the Applicant, in preparing the response, to consider fully the entire references as potentially teaching all or part of the claimed inventions, as well as the context of the passages as taught by the prior art or disclosed by the Examiner.

Response to Remarks

3. Applicants arguments have been carefully considered however unpersuasive. As stated earlier, "segmentation strategies" without specific definition in the specifications read on the "models" (Bayesian models) of the cited reference. The Examiner appreciates the distinctions argued in Applicants' Response at pages 4-6, however Applicants argued distinctions (e.g. the segmentation strategies not being multivariate models) that are not presented in the claims. That is, the claims need to be further limited to reflect the argued distinctions and overcome the reference. Though the applied art and Applicants' invention

Art Unit: 3622

may be different methods producing different results as argued, the claims as presented nonetheless read on the applied art. The previous rejections stand.

Claims 1-21 remain rejected under 35 USC 102 as anticipated by "Bayesian Model Averaging: A Tutorial (with discussion)", Statistical Science 14:4, pp. 382-417, Jennifer A Hoeting et al., November 1999. Claims 2-17 and 19-21 remain rejected under 35 USC 103 as unpatentable over the "Bayesian Model Averaging" article as applied to claim 1 in view of the admitted prior art.

Claims 1-17, 22-25, 27-32 are rejected under 35 USC § 101. New claims 22-32 are rejected under the first paragraph of 35 U.S.C. 112 (see below).

The following is a repeat of the previous answers to arguments.

4. Argument:

Applicant argues

“that the "Bayesian Model Averaging" article deals solely with the combining of models; that is, its "combination" occurs at the model level. In contrast, the present invention relates to combining of scores from different segmentation strategies.

“that the "averaging of models" taught by the prior art article is not identical to, or even suggestive of, the combination of different segmentation strategy scores recited in claims 1 and 18...”

Response:

During patent examination, the claims are given the broadest reasonable interpretation consistent with the specification. See *In re Morris*, 127 F.3d 1048, 44 USPQ2d 1023 (Fed. Cir. 1997). See MPEP § 2111 - § 2116.01 for case law pertinent to claim analysis.

Applicants cited *ATD Corporation v. Lydall, Inc.*, 159 F.3d 534, 48 USPQ2d 1321 (Fed. Cir. 1998), herein ATD, apparently for the proposition that the pending claims, especially claims 1 and 18, should be interpreted more narrowly in view of the specifications and the prosecution history, and thus are not anticipated by the **Bayesian Model Averaging (BMA) article**.

In ATD, the court stated that “.. *claims are understood in light of the specification of which they are a part. When "the specification explains and defines a term used in the claims, without ambiguity or incompleteness, there is no need to search further for the meaning of the*

Art Unit: 3622

term." Multiform, 133 F.3d at 1478, 45 USPQ2d at 1433. However, when such definition is challenged it is often appropriate, despite facial clarity and sufficiency of the specification and the prosecution history, to receive evidence of the meaning and usage of terms of art from persons experienced in the field of the invention. See Fed. R. Evid. 702- 706."

However, in the present Application, the specifications do not explain and nor "define without ambiguity or incompleteness" terms used in claims 1 and 18 as required by ATD.

At issue are the recited steps of claims 1 and 18 :

"running more than one segmentation strategy ... to generate for each strategy a score",
and

"generating a first composite score ... by combining each of the scores"

In the specifications, "strategies" are used interchangeably with "models" "*Segmentation strategies well known to one in the art can include, for example, linear models, logistic models, RFM segmentation, and CHAID (Chi-square Automatic Interaction Detection) segmentation*" (specs p. 2, 4th para.) thus interpreting "strategies" as "models" is proper and the BMA models properly anticipate the claimed "strategies" ..

5. Argument:

"In a practical manner, the concept of Bayesian Model Averaging appears only to be able to be applied to a single class of models (e.g., only linear regression, or only CART, etc.) during a single implementation of the described method... In direct contrast, as taught by the present invention, combining of scores from different segmentation strategies does not have this limitation but can occur across different classes of models.

Response:

It is not claimed that combining of scores from different segmentation strategies have to occur across different classes of models.

Further, nowhere in the present Application specifications, "combining of scores from different segmentation strategies across different classes of models" is described as a material aspect of the invention as required by ATD (... "*In the patent specifications the presence of embossments making contact with adjacent layers of foil to separate the layers is described as a material aspect of the invention....*") thus ATD is inapplicable here.

6. Argument: "Throughout the article and the examples, the Bayesian Model Averaging method is not used for multiple targets but, rather, its usefulness is limited to predicting only a single target. This limitation is also an indication of its difference from the

Art Unit: 3622

presently claimed method that combines scores from different, or multiple, segmentation strategies. For example, the present inventive method can "target" both (a) a higher response rate from mailer recipients and (b) higher average sales transaction amount...."

Response: Even if BMA is limited to predicting a single target (this point is not conceded) the specifications do not specify that predicting multiple targets is an essential part of the invention as required by ATD. In fact, the specifications "...*The different strategies can be used to independently predict a single targeted event.*" seem to suggest otherwise. Thus the claims cannot be interpreted as requiring such limitation.

7. **Argument:** "...One of the clearest indicators of the difference between model averaging (of the prior art article) and the combining of different scores (as presently claimed) is the great computational difficulty involved in Bayesian Model Averaging (BMA)..."

"...the relatively simple statistical combination (e.g., weighted averaging) that can be performed with different segmentation strategy scores. In direct contrast, however, combining models (as taught by the prior art article) is an extremely difficult task that is not equivalent to the claimed invention.... That BMA can not be so accomplished, strongly indicates that it is fundamentally different than the present invention recited in claims 1 and 18."

Response: Even if the BMA method, computationally, cannot be accomplished simply, as argued (point not conceded), BMA is still anticipatory because Applicants do not claim that Claims 1 and 18 must be performed in only "relatively simple statistical combinations", as argued.

Further, the specifications do not specify that "relatively simple statistical combinations" is an essential part of the invention as required by ATD.

In fact, the specifications "*A number of independent segmentation strategies are performed on the customers, each strategy resulting in its own set of scores. The sets of scores are then combined to form a composite score for each customer which is used to generate a 10 ranked list of the customer population. Furthermore, different composite scores can be determined using different possible methods and these different scores can, themselves, be combined to generate an overall score and ranking for each customer. The targeted recipients for particular marketing materials are selected based on these rankings.*" show that the

Art Unit: 3622

Application methods are not limited to “relatively simple statistical combination (e.g., weighted averaging)” as argued but other methods that may be much more complicated may be involved. Thus the limitation of simplicity of combination cannot be read into to the claims as urged.

8. **Argument:**” Applicant urges that, in light of the present specification and the evidence from the BMA article, that model averaging is not identical to combining scores from different segmentation strategies as recited in claims 1 and 18. ...Accordingly, Applicant asserts that the BMA article does not disclose or suggest the recited steps of: “running more than one segmentation strategy ... to generate for each strategy a score”, and “generating a first composite score ... by combining each of the scores” as meant within claims 1 and 18 when interpreted in light of the specification by one of ordinary skill in the art.”

Response :As shown above and further below, the Examiner has (a) identified the elements of the claims, (b) given the elements of the claims the broadest reasonable interpretation consistent with the specifications, and (c) identified corresponding elements disclosed in the allegedly anticipating reference, therefore a prima facie case under 35 USC 102 has been made.

Rejections of all other pending claims are maintained on the same basis as for claims 1 and 18.

9. The following is a repeat of the last Office Action with occasionally a clarification which shall be in **bold typeface**.

Official Notices

11. All Official Noticed facts taken in the previous Office Actions and not seasonably challenged are taken as admitted. In re Chevenard, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). See MPEP 2144.03.

Art Unit: 3622

Claim Rejections - 35 USC § 102

12. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

13. **Claims 1 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Bayesian Model Averaging: A Tutorial (with discussion) (306k bytes) Corrected version of the Statistical Science 14:4, 382-417 article.**

Jennifer A. Hoeting, David Madigan, Adrian E. Raftery and Chris T. Volinsky, November 1999, downloaded Jul 22, 2002 from www.stat.washington.edu/www/research/online/hoeting1999, hereinafter "the BMA article".

The BMA article, at pages 393-394, especially p. 394 col 1 first 2 full paragraphs, discloses

A method for segmenting comprising the steps of:
running more than one segmentation strategy (Definition of BMA is combining several models, model averaging; p. 394 col 1 first 2 full paragraphs, especially step 1') against a population (of patients, p. 393);
generating a first composite score for each population member by combining each of the scores for that member from each of the more than one segmentation strategy (p. 394 col 1 first 2 full paragraphs, especially steps 2')
and
segmenting the population according to the generated first composite scores (p. 393-394, esp. p. 394, col 1 first 2 full paragraphs, steps 1', 2', 3 and 4).

Claim 18. A computer readable medium bearing instructions for segmenting members of a population of members, said instructions being arranged to cause one or more processors upon execution thereof to perform the steps of:

running more than one segmentation strategy against a population to generate for each strategy a score for each population member;
generating a first composite score for each population member by combining the scores for that member from each of the more than one segmentation strategy; and
segmenting the population according to the generated composite scores.

Claim 18 parallels claim 1 in computer readable medium format and is rejected on the same basis.

Claims rejections. 35 U.S.C. 103

14. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Art Unit: 3622

15. Claims 2-17, 19-21 are rejected under 35 U.S.C. 103 (a) as being unpatentable over “the BMA article” as applied to claim 1 in view of admitted art and other prior art.

Claim 2.

“ The method according to claim 1, further comprising the step of: generating a second composite score, different than the first composite score, for each population member, **wherein the second composite score indicates variance among the population**; said each second composite score based on that population member’s scores for each strategy.”

The BMA articles discloses combining several models and segmenting based on a resulting score.(claim 1) . BMA also discloses that combining models enhances predictive results. BMA discloses the resulting score based on a weighted average (step 2’).

Further, it is admitted that any composite score for each member of the population derived from combining the member’s scores for each strategy is ” **indicative of variance among the population**” (Applicants’ representative’s statement in the Amendment at p. 4 second full para., :“ as the ...composite scores for each population member are constructed from individual segmentation strategies that by definition indicate variance among the population members , ...each of the exemplary methods of generating a composite score produces a result which as compared to the other population members’ composite scores is indicative of variance among the population”) .

Thus, it would be obvious to one skilled in the art that the BMA method could be repeated to calculate a second composite score for each member of the population , e.g. using a straight average of the scores per member per model instead of the weighted average disclosed by BMA (such substitution is well-known in the arts) to allow further characterization of the segment with the new composite score.

Claim 3:

“The method according to claim 2, further comprising the step of: generating an overall score for each population member by combining the first and second composite scores; and segmenting the population according to the generated overall score.”

Segmenting based on scores is disclosed by the BMA article. Combining two or more scores as a method for obtaining a more reliable number is a well-known calculation method. One example would have been ,for one student, calculating a grade point average across several instructional subjects, to measure the overall proficiency of the student. It is well-known the more measures obtained the better the measured object can be characterized.

Art Unit: 3622

Thus one skilled in the arts would have known to combine two composite scores, obtained over combined models, to take advantage of the general knowledge that more scores /models yield better measuring results.

Claim 4

The method according to claim 3, further comprising the step of:
forwarding marketing material to a selected portion of the segmented population.

It is admitted in the specifications that segmenting methods for consumers targeting is well known. Thus one skilled in the arts would have known to use the efficient segmentation method as discussed in claim 3 to forward targeted material to selected portions of a segmented population for best results.

(e.g., see also "Fleet financial banks on data warehouse, Target Marketing, Philadelphia, Nov 1998, which discloses segmenting a population based on combined modeling methods including CART (p. 2 first full para.) in which the consumers are sorted (by scores, p. 1) as good/bad prospects for marketing mailings).

Claim 5.

A method for segmenting members of a population of members, comprising the steps of:
running more than one segmentation strategy against the population to generate for each strategy a score for each population member;
determining a set of scores for each population member, wherein the set of scores for a particular member comprises the score for that particular member from each of the more than one segmentation strategy;
generating for each population member a first composite score based on that member's set of scores; and
ranking the population members, in accordance with the first composite scores, into a first ranked list.

This claim parallels claim 1, disclosed as above, with the addition of ranking the members. Ranking is a well-known method that can be substituted for scoring (see e.g. ranking which is disclosed in the Equifax article, mentioned in last Office Action).

One skilled in the arts thus would find it obvious to rank members for segmentation instead of just scoring as ranking permits better (continuous) segmentation, whenever called for by the segmentation goals, as is well-known in the arts.

Claim 6. The method according to claim 5, further comprising the step of: selecting a portion of the population to receive marketing material based on the first ranked list.

The additional limitation parallels that of claim 4 and is rejected on the same basis.

Art Unit: 3622

Claim 7. The method according to claim 5, further comprising the steps of:
identifying a plurality of segmentation strategies;
performing lift table analysis on each of the plurality of segmentation strategies;
and
selecting a subset of the plurality of segmentation strategies based on the lift table analyses, wherein the subset comprises the more than one segmentation strategy run against the population.

It is admitted in the specifications that the lift table method to select segmentation strategies is prior art. It would have been obvious to one skilled in the arts to combine the method of claim 5 as discussed above with the admitted art so as to keep only the most promising modeling strategies yet still retain the enhanced results from combining more than one modeling strategies such as taught by the Equifax article.

Claim 8. The method according to claim 5, wherein the first composite score for each population member is an average of that member's set of scores.

The BMA article, in the cited sections, does not explicitly teach the resulting numeric score is a straight average but the Data Mining articles, which also teaches combining models, at pp. 213-219, discloses an average composite score, at p.216, 3rd full paragraph. Thus one skilled in the arts would have known to combine the teachings of the BMA article with the Data Mining article to implement a simple way of measuring a composite score.

Claim 9. The method according to claim 8, wherein the average is a weighted average.

The BMA article teaches the resulting score is based on a weighted average . (p. 394 col 1 first 2 full paragraphs, especially steps 2')

Claim 10. The method according to claim 5, further comprising the step of: generating for each population member a second composite score, different than that member's first composite score, based on that member's set of scores.

The additional limitation parallels that of claim 2 in broader terms and thus is rejected on the same basis.

Claim 11. (" The method according to claim 10, wherein the second composite score for each population member is based on an ANOVA comparison of the sets of scores.

It is interpreted that "based on an ANOVA comparison of the sets of scores" means using the F score. (see specifications).

Art Unit: 3622

The ANOVA technique is a well-known and popular technique and the F score which is part of the ANOVA calculation is also well-known. One skilled in the art would have known to use the F score as a composite score across the modeling strategies, for each population member, to distinguish the segment (by comparison of variances), as generally well-known in the art and at the same time to capitalize on the enhanced benefits of models combining as taught by the BMA article.

Claim 12. The method according to claim 10, further comprising the steps of: generating for each population member an overall score based on the first and second composite scores for that member; and ranking the population members, in accordance with the overall scores, into a second ranked list.

Combining models give better results (BMA article, Equifax article, Data Mining article). It is further obvious to combine two scores for each member for enhanced results (see claim 3). Ranking as a method for segmenting is known. The Equifax article.

The additional limitation of this claim essentially parallels that of claim 3 and is rejected on the same basis.

Claim 13. The method according to claim 12, further comprising the step of: selecting a portion of the population to receive marketing material based on the second ranked list.

The additional limitation parallels that of claim 4 or 6 and is rejected on the same basis.

Claim 14. (The method according to claim 10, further comprising the step of: generating for each population member a third composite score based on the sets of scores, wherein the third composite score determines variance among the sets of scores differently than the first and second composite scores.

The additional limitation regarding the composite score determining variance parallels that of claim 2 and is rejected on the same basis.

It is further obvious, per Applicant's argument as presented in claim 2, that each composite score (e.g., called 3rd) will determine variance differently from any other composite score (e.g. called 1st and second).

The additional limitation regarding a third composite score is rejected on the same basis as that of claim 3, based on the known principle that the more measures obtained the more accurate the resulting measure(score)

Art Unit: 3622

Thus one skilled in the arts would have found it obvious to add another third measure to make the results even more accurate.

Claim 15.(The method according to claim 14, further comprising the steps of:
generating for each population member an overall score based on at least two of the first, second and third composite scores; and
ranking the population members in accordance with the overall scores, into a second ranked list.)

As to claims 15 and 16, it is obvious to one skilled in the arts to have as many scores as desired on the known and above-discussed principle of combining the scores for greater measurement accuracy (see claim 3).

Claim 16. A method for compositely segmenting members of a population, comprising the steps of:

- running more than one segmentation strategy against the population to generate for each strategy a score for each population member;
- for each of the more than one segmentation strategy, assigning a rank to each population member according to the scores for that segmentation strategy;
- determining for each population member a set of ranks, wherein the set of ranks for a particular population member comprises the assigned rank for that particular member from each of the more than one segmentation strategy;
- generating a first composite score for each population member by averaging the set of ranks for that member;
- assigning a first composite rank to each population member in accordance with the first composite scores;
- generating a second composite score for each population member based on an ANOVA comparison of the sets of ranks; assigning a second composite rank to each population member based on the second composite scores;
- generating an overall score for each population member by averaging the first and second composite ranks for that member; and
- ranking the population according to the overall scores.

Claim 16 is a combination of claims 5, 11, and 12, and thus is rejected on the same bases.

Claim 17. The method according to claim 16, further comprising the step of:
selecting a portion of the population as ranked in accordance to the overall score.

The BMA article in view of known art, such as disclosed in the Equifax article, discloses segmentation by ranking thus it would have been obvious to use the method of claim 16 as disclosed above to rank and segment.

Art Unit: 3622

Claim 19-21 parallel claims 2-4 in computer readable medium format and are rejected on the same basis.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

16. Claims 1-17, 22-25, 27-32 are rejected under this section as claimed inventions directed to non-statutory subject matter.

Claims 1, 5, 16, 22 and all their dependents (except claim 26) claim inventions that do not fall within the technological arts because the disclosed and claimed inventions are not tied to any technological art or environment.

All the method steps of independent claims and their dependents can be performed manually without interaction of a physical structure or machine.

For the same reasons, independent claims 1, 5, 16, 22 and all their dependents are also rejected under 35 U.S.C. 101 because the claimed methods do not recite a useful, concrete and tangible result under *In re Alappat*, 31 USPQ2d 1545 (Fed. Cir. 1994) and *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 47 USPQ2d 1596 (Fed Cir. 1998).

Because the independently claimed inventions do not fall within the technological arts and are directed to abstract and intangible ideas which does not produce a useful, concrete and tangible result, those claims and claims depending from them, are not permitted under 35 USC 101 as being related to non-statutory subject matter. However in order to consider those claims in light of the prior art, examiner will assume that those claims recited statutorily permitted subject matter.

In order to overcome this rejection it is suggested that Applicants amend the claims, at the very least, to include "using a computer " in the body of the claims, in at least one method step.

Art Unit: 3622

Claim Rejections - 35 USC § 112

17. The following is a quotation of the first paragraph of 35 U.S.C. 112:
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

18. **Claim 22-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.**

The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

“wherein said first score is a stronger indicator of variance than said second score” in

Claim 22. (New) *“A method for segmenting members of a population of members comprising: running a first segmentation strategy against a population to generate a first score for each population member, said first score indicating variance among the population;*

running a second segmentation strategy, different than said first segmentation strategy, against the population to generate a second score for each population member, said second score indicating variance among the population, wherein said first score is a stronger indicator of variance than said second score; generating a first composite score for each population member by combining the respective first score and the respective second score; and segmenting the population according to the generated first composite scores.”

Is not supported in the specifications. Applicants are to point out the specific support to overcome this rejection. Claims, 23-32, dependent on claim 22 are rejected on the same basis.

Conclusion :

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 3622

Alan Levingston, "Modern Miners Plumb for Gold", ABA Banking Journal, December 1998, hereinafter the "Plumb for Gold" article discloses Segmenting a population based on several variables models and multiple models combination .

Jeff Morrisson, "Introducing C.A.R.T. to the forecasting process "The Journal of Business Forecasting Methods & Systems "
Flushing , Spring 1998, vol 17, p. 1, pp 9-12, showing segmentation per tree structure

"Fleet financial banks on data warehouse, Target Marketing, Philadelphia, Nov 1998, discloses model for estimating a user's probability for responding to a mailing, , using scores per user for segmentation (p. 1) using combined modeling methods including CART (p. 2 first full para.)

A Theory of Multiple Classifier Systems And Its Application to Visual Word Recognition (1992)" by Tin Kam Ho, from <http://citeseer.nj.nec.com/ho92theory.html>, downloaded 7/22/02, discloses combining sets of independent classifiers and a decision combination function for results enhancement.

"Eleven Multivariate Analysis Techniques: Key Tools in Your Marketing Research Survival Kit" by Michael Richarme
http://66.216.75.103/publ_art/Multivariate.htm, downloaded 7/22/02 discloses analysis techniques

Previously cited:

Equifax launches Thin Rank, a Risk Model to Rank Order All Consumers" PR Newswire, p6844, April 7, 2000, Dialog File # 02449611, (File 621)...", (the Equifax article)." Discloses credit risk scoring using combined models.

Mastering Data Mining, The Art and Science of Customer Relationship Management by Michael J.A. Berry and Gordon S. Linoff, 2nd edition, John Wiley and Sons, copyright 2000, pp 213-225 Discloses combining multiple models yields better results (p 213-214, Fig 7.16) combined modeling on all input data (pp213, p216 , and, a combined score based on variance (p. 216, 4th full paragraph, using "statistics"; Fig 7.17: "evidence with a confidence") averaging the scores for the combined score, across the models (p. 216, 3rd full paragraph).

PCT Wo0034889 discloses scoring each segment , weighted average computation of scores .

* PCT WO 01/06405 (Pub date: 01/25/2001, priority to US Patent application 09356191 filed 16/99) discloses multiple models (each model rep. a product) , scoring of members of a

Art Unit: 3622

population, ranking the scores among the models/member so to market the most promising product and who to market to. For each model, the members are scored (based on prob. for purchasing) then segmented (sorted), then mail to the most promising members. For each model (product) a combined score (average, based on scores of each consumer) is calculated.

"Marketing research: A state of the art review and directions for the twenty first century" by Malhotra, Naresh K and others, Journal of the Academy of Marketing Science, v 27n2 pp 160-183, Spring 1999, Dialog File 15, # 01795363 discloses ANOVA techniques and other marketing research methodologies.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh H. Le whose telephone number is 703-305-0571. The Examiner works a part-time schedule and can best be reached on Tuesday-Wednesday 9:00-6:00. The examiner can also be reached at the e-mail address: khanh.le2@uspto.gov. (However, Applicants are cautioned that confidentiality of email communications cannot be assured.)

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Eric Stamber can be reached on 703-305-8469. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

KHL
August 04, 2003
KHL

Steve Gravini for GWS

STEPHEN GRAVINI
PRIMARY EXAMINER